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ABSTRACT

This chapter is divided into four sections: What cooperative learning is; research; models of cooperative learning; and conclusion. Cooperative learning is defined as a group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups, in which each learner is held accountable for his or her own learning, and is motivated to increase the learning of others. Each of the several key elements of cooperative education is discussed, including: positive interdependence (which includes positive goal, resource, reward, identity, role, and outside enemy interdependence); team formation; accountability; social skills; structures and structuring; distributed leadership; group autonomy; group processing; and face-to-face interaction. The research section provides a brief overview of the research comparing and contrasting cooperative learning methods with competitive and individualistic learning, concluding that cooperative learning yielded superior outcomes. The five most common models of cooperative learning (the structural approach; group investigation; student team investigation; curriculum packages; learning together) are then briefly described. Teachers can choose one of the models described but may be better off adopting and adapting parts of several models to create their own model of cooperative learning that best fits their teaching style and situation. (Contains 23 references.) (KFT)

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Chapter 1

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A Brief Introduction to Cooperative Learning

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It is easy to hop on the newest language teaching methodology wagon as it takes the profession on its usually short ride. However, when a teaching/learning method has through careful research shown itself to be superior to the status quo in ways that language teachers care about, when the method has been worked out in detail over a period of twenty years and has been shown to be relevant to the specific situation in which we find ourselves, then it is necessary to make sure that other language teachers in Japan hear about the method. The purpose of this book is to share this method with teachers who are convinced that group work is essential to students attaining communicative competence, but are often disappointed with both the process and product of typical group work activities.

Cooperative learning (CL) is not a new fad. Olsen and Kagan (1992) state that its basic roots have been traced back to the Talmud. It manifested itself in England in the late 18th century schools of Joseph Lancaster and Andrew Bell, and in the U.S. in 1806 when a Lancastrian school opened which started the "common school" movement that implemented cooperation in learning. Co-

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operative learning is associated with Colonel Francis Parker, superintendent of public schools in Quincy, Massachusetts from 1875 to 1880. Dewey (in Sharan & Sharan 1992), incorporated cooperative learning into his project method of education. During the 1940s and 1950s more interest was focused on competitive learning, but in the 1960s interest in cooperative learning was revived. In the 1970s and 1980s cooperative learning activities were formalized into the structures now recognized as Cooperative Learning.

What Cooperative Learning Is

Olsen and Kagan (1992, p. 8) define Cooperative Learning:

> Cooperative Learning is group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups and in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others.

The theoretical bases of cooperative learning come from Vygotsky, with his Zone of Proximal Development Theory, Wittrock, with his Theory of Cognitive Elaboration, and Deutsch with his theory of goal structures. Vygotsky (1988) called the Zone of Proximal Development "the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers." Vygotsky (in Johnson and Johnson [1991]) stated: "What children can do together today, they can do alone tomorrow."

Wittrock (1978) theorized that when a person teaches or explains something, that person learns most effectively. He called this the Theory of Cognitive Elaboration or Cognitive Restructuring.

In 1949 Deutsch (in Slavin [1990]) identified three different goal structures in classrooms: cooperative, competitive, and individualistic. Deutsch's work has served as the basis for many empirical studies of cooperative learning in the classroom.

There are several key elements of a cooperative lesson described below.

1. Positive Interdependence. This is structuring group work so that in order for a group to succeed, all members in the group must meet their individual goals. Ways to structure positive interdependence include:

   Positive Goal Interdependence: The group might turn in a single paper or report, but all students must achieve their individual goals, that is, increase their individual scores by 5%, for example.

Positive Resource Interdependence: The group shares one pencil and one piece of paper, or one copy of a handout.

Positive Reward Interdependence: Every group member gets bonus points if all group members improve by a certain percentage.

Positive Identity Interdependence: Students choose a group name, flag, or sign.

Positive Role Interdependence: Each group member takes on an essential role, such as reader, writer, encourager, checker, praiser, and so forth.

Positive Outside Enemy Interdependence: The group competes against another group or against its own earlier score.

2. Team Formation. Research shows that heterogeneously grouped teams show more benefits than homogeneously formed teams (Dishon & O'Leary, 1984). Once groups are formed, group cohesion is engendered through team building activities. Cooperative groups usually consist of two to four members.

3. Accountability. Each individual is accountable for his or her own learning and is also accountable to the group. This means that grading takes into account individual grades and group grades (Olsen & Kagan, 1992).

4. Social Skills. Though usually thought unnecessary, especially in Japan, it is often necessary to explicitly teach the language and behavior needed to work together in English. Cooperative Learning emphasizes the explicit teaching of social skills (Dishon & O'Leary, 1984).

5. Structures and Structuring. These are a set of ways to organize student interactions with other students and with the content (Olsen & Kagan, 1992). Each structure explains step-by-step what the teacher and students must do. These structures are generic, content-free procedures that can be used for any subject at any age or proficiency level.

6. Distributed Leadership. All group members should have a turn as group leader (Dishon & O'Leary, 1984).

7. Group Autonomy. Groups should first work to solve their problems unaided so that each individual learns to rely on the members of the group to explain or to work out ambiguities together.

8. Group Processing. At the end of an activity or unit, the group should reflect on how it has performed by reviewing the skills that it practiced, what it did well, and what it needs to work on next time. Teachers may provide a handout to track use of the skills.

9. Face-to-Face Promotive Interaction. For cooperative learning to be effective, the members of the group have to be in very close physical proximity, face to face.

Research

There have been numerous studies comparing competitive or individualistic learning with cooperative learning in the past twenty years. Johnson and Johnson (1989) did a meta-analysis of 352 of these studies and found that achievement was higher for students engaged in cooperative learning. Other general suggested findings are that with cooperative learning students:

- more frequently use high-level reasoning strategies (Spurlin, Dansereau, Larson, & Brooks, 1984; Larson, Dansereau, O'Donnell, Hythecker, Lambiotte, & Rocklin, 1985)
- have higher scores on subsequent tests taken individually (Lambiotte, Dansereau, Rocklin, Fletcher, Hythecker, Larson, & O'Donnell, 1987).
- like their classmates better (Cooper, Johnson, Johnson, & Wilderson, 1980)
- have increased self-esteem (Slavin, 1983)
- increase their ability to be self-directed (Johnson, Johnson, Johnson, & Anderson 1976)
- increase their liking for the class in general (Kulik & Kulik, 1979).

In language classes, research on cooperative learning has suggested that it:

- was better than whole class instruction for developing integrative and discrete language skills (Bejarano, 1987)
- encouraged students to take more turns in cooperative learning groups compared to a teacher-centered class, thus leading to more practice in language production (Deen, 1991).

Models of Cooperative Learning

There is more than one flavor of cooperative learning. The five most common models of cooperative learning are The Structural Approach (Kagan, 1989), Group Investigation (Sharan & Sharan, 1992), Student Team Investigation (Aronson, Blaney, Stephan, Sikes, & Snapp, 1978; Slavin, 1990), Curriculum Packages (Slavin, Leavey, & Madden, 1986; Slavin et al., 1986), and Learning Together (Johnson, Johnson, & Holubec, 1991, 1992, 1994). A brief description of each model follows:

The Structural Approach is based on the use of various distinct sequences of classroom behaviors, called structures (Kagan, 1989). A structure is not an activity but is a framework within which an activity is done. Structures can be used over and over again with different curriculum materials and throughout a syllabus. For a list of structures see Olsen & Kagan (1992) or Kagan (1989, 1994).

Group Investigation, summarized in Sharan (1994), incorporates four basic features: investigation, interaction, interpretation, and intrinsic motivation:

1. Investigation. Each student is an investigator who coordinates his or her inquiry into the class's common research project which is a challenging, multifaceted problem presented by the teacher.
2. Interaction. Students must learn to work as a team and discuss topics.
3. Interpretation. Students compile information from a variety of sources, exchange information and ideas, and integrate what they have learned with what their research partners share from their own investigations.
4. Intrinsic Motivation. Since students have control of their own learning and must share what they have learned with others, there is a high level of motivation to learn.

Student Team Investigation: This model of cooperative learning was developed by Aronson and Slavin. Examples are the various kinds of jigsaw activities, and procedures to structure interdependence.

Curriculum Packages are sets of cooperative learning material that are usually specific to a subject and age level. Two commercially published examples are Comprehensive Integrated Reading and Composition (CIRC), (Slavin, Leavey, & Madden, 1986), and Team Accelerated Instruction (TAI) (Slavin et al., 1986), which uses cooperative learning procedures to teach mathematics.

Learning Together: This approach, developed by David Johnson and Roger Johnson, emphasizes the teaching and practicing of the social skills required to work together. Teachers learn to evaluate material to be taught, choose the type of activity appropriate to help students learn that material, and structure the activity so that it incorporates all five of the elements they see as a requirement for a lesson to be considered cooperative. (For an explanation of the five elements see their article in this volume.)

Conclusion

Teachers can choose one of the models of CL described above, but may be better off adopting and adapting parts of several models to create their own flavor of CL that best fits their teaching style and situation. For examples of how to do this, refer to the articles in this volume.

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